

Serial No.: 10/552,857

Response to Office Action mailed: January 29, 2009

Amendment Dated: March 30, 2009

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1-61. (canceled)

62. (new) A nucleic acid construct comprising a first nucleic acid portion encoding a chalcone synthase (CHS) from a *Trifolium* species and a second nucleic acid portion encoding a dihydroflavonol 4-reductase (BAN) from a *Trifolium* species, said construct expressing both the CHS and the BAN when the construct is introduced into a plant cell.

63. (new) The nucleic acid construct according to Claim 62 further including comprising a third nucleic acid or nucleic acid fragmentportion encoding leucoanthocyanidine reductase (LAR) from a *Trifolium* species.

64. (new) The nucleic acid construct according to Claim 62, wherein said first and second nucleic acid or nucleic acid fragmentsportions are from *Trifolium repens*.

65. (new) A nucleic acid construct comprising  
a first nucleic acid portion encoding a chalcone synthase (CHS), or complementary or antisense to a sequence encoding CHS, said first nucleic acid portion comprising a nucleotide sequence selected from the group consisting of Sequence ID Nos. 1, 3, 5 and 7, (b) nucleotide sequences encoding Sequence ID Nos. 2, 4, 6 and 8; (c) complements of the sequences recited in (a) and (b); (d) sequences antisense to the sequences recited in (a), and (b) and (c); (e) functionally active fragments and variants of the sequences recited in (a), (b), (c) and (d); and

(e) RNA sequences corresponding to the sequences recited in (a), (b), (c), (d) and (e); and a second nucleic acid portion encoding a dihydroflavonol 4-reductase (BAN), or complementary or antisense to a sequence encoding BAN, said second nucleic acid portion comprising a nucleotide sequence selected from the group consisting of (a) Sequence ID No. 9; (b) nucleotide sequences encoding Sequence ID No. 10; (c) complements of the sequences recited in (a) and (b); (d) sequences antisense to the sequences recited in (a), (b) and (c); and (e) functionally active fragments and variants of the sequences recited in (a), (b), (c) and (d); and (f) RNA sequences corresponding to the sequences recited in (a), (b), (c), (d) and (e); said construct modifying the levels of both the CHS and the BAN when the construct is introduced into a plant cell.

66. (new) The nucleic acid construct according to Claim 65, further comprising a third nucleic acid portion encoding a leucoanthocyanidine reductase (LAR), or complementary or antisense to a sequence encoding LAR, said third nucleic acid portion comprising a nucleotide sequence selected from the group consisting of (a) Sequence ID Nos. 11, 13 and 15; (b) nucleotide sequences encoding Sequence ID Nos. 12, 14 and 16; (c) complements of the sequences recited in (a) and (b); (d) sequences antisense to the sequences recited in (a), (b) and (c); and (e) functionally active fragments and variants of the sequences recited in (a), (b), (c) and (d); and (f) RNA sequences corresponding to the sequences recited in (a), (b), (c), (d) and (e); said construct modifying the levels of each of the CHS, the BAN and the LAR when the construct is introduced into a plant cell.

67. (new) The nucleic acid construct according to claim 65 wherein said functionally active fragments and variants have at least approximately 95% identity to the relevant part of the sequences recited in (a), (b), (c) and (d), respectively, and have a size of at least 30 nucleotides.

68. (new) The nucleic acid construct according to claim 65 wherein

said first nucleic acid portion comprises a nucleotide sequence selected from the group consisting of (a) Sequence ID Nos. 1, 3, 5 and 7; (b) nucleotide sequences encoding Sequence ID Nos. 2, 4, 6 and 8; (c) complements of the sequences recited in (a) and (b); (d) sequences antisense to the sequences recited in (a), (b) and (c); and (e) RNA sequences corresponding to the sequences recited in (a), (b), (c), (d) and (e); and

said second nucleic acid portion comprises a nucleotide sequence selected from the group consisting of (a) Sequence ID No. 9; (b) nucleotide sequences encoding Sequence ID No. 10; (c) complements of the sequences recited in (a) and (b); (d) sequences antisense to the sequences recited in (a), (b) and (c); and (e) RNA sequences corresponding to the sequences recited in (a), (b), (c), (d) and (e).

69. (new) A plant cell, plant, plant seed or other plant part, having incorporated therein the nucleic acid a construct according to Claims 62.

70. (new) A plant, plant seed or other plant part derived from a the plant cell or plant according to Claim 69 and having incorporated therein the nucleic acid construct according to Claim 62.

71. (new) A method of modifying one or more processes selected from the group consisting of condensed tannin biosynthesis; protein binding; metal chelation; anti oxidation; UV-light absorption; and plant defense to a biotic stress in a plant, said method including comprising introducing into said plant an effective amount of a the nucleic acid construct according to claim 62.

72. (new) The method according to Claim 71, wherein the method comprises modifying plant defense to biotic stress and the biotic stress is selected from the group consisting of viruses, micro-organisms, insects and fungal pathogens.

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73. (new) The method according to claim 71 wherein said nucleic acid construct further comprises a third nucleic acid portion encoding leucoanthocyanidine reductase (LAR) from a *Trifolium* species.

74. (new) The method according to Claim 71 wherein said first and second nucleic acid portions are from *Trifolium repens*.

75. (new) A method of modifying forage quality of a plant by disrupting protein foam and/or conferring protection from rumen pasture bloat, said method including comprising introducing into said plant an effective amount of a the nucleic acid construct according to Claim 62.

76. (new) The method according to claim 75 wherein said nucleic acid construct further comprises a third nucleic acid portion encoding leucoanthocyanidine reductase (LAR) from a *Trifolium* species.